Proposal to Provide an Air Mobility Aircraft Plan

STATEMENT OF QUALIFICATIONS
PACKET A

For:

Washington State Department of Transportation

Submission By:

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Introduction - Road Map to a Mobility Revolution

With the advent of Advanced Air Mobility (AAM), the State of Washington finds itself at an inflection point, a time of revolutionary shifts in what's possible. Mobility transformations will benefit residents and businesses, changing the way people live, work, and travel and lifting a decades-old envelope of constraints that have hampered movement and limited efficiencies.

AAM—electric aircraft and Unmanned Aerial Systems (UAS, often called drones)—offers stunning **social benefits**: improved healthcare outcomes to rural residents; new labor mobility opportunities for remote communities, including island residents in and around the Puget Sound; and new options to bridge the urban-rural divide, allowing individuals who live at greater distances from metropolitan areas to commute more easily for better-paying jobs and to have new AAM jobs within their own communities.

Figure 1 - Joby S4 eVTOL may be coming to Washington State as early as 2025. OEMs such as Boeing have investments in similar electric vehicles.

AAM promises increased **economic prosperity**: NEXA Advisors' studies for the states of Ohio, Virginia, Arkansas, Oklahoma, and New York, along with British Columbia and many international regions forecast through 2045 billions of dollars in increased GDP, hundreds of millions in new tax revenues, and many thousands of new jobs for each.

How to realize these dramatic benefits? Washington must work with local jurisdictions and planning organizations to carefully integrate AAM into current statewide transportation plans, creating **new and seamless connectivity options** with dozens of the State's regional airports, with its 3,200-mile rail system, with the largest ferry system in the US, with marine freight ports, with truck/freight economic corridors, and with bike lanes, bus routes, and public roads.

Vertiport locations must be carefully selected for maximum demand and connectivity, as well as providing greater accessibility to transportation deserts. And all of this must be accomplished with a primary goal of ensuring that this new mode is implemented in a way that increases the overall equity of the transportation system, especially when it comes to disadvantaged communities. **New state regulatory mechanisms** including **land use policies** must be developed to complement FAA regulation and federal oversight. And **funding** for infrastructure must be found. So long as the **AAM business case** is solid, **public-private partnerships** to finance infrastructure will likely relieve taxpayer obligations.

The State stands poised to reap **significant early benefits** from AAM due to numerous unique factors: many underserved, sparsely populated counties in need of new jobs, better transportation connections, and improved healthcare; abundant waterways and several inhabited islands served by a robust network of (slow) ferries; about 140 public use airports; and a blockbuster list of businesses—including ten Fortune 1,000 companies (including Amazon, Starbuck, Costco and Microsoft) looking to send key strategic teams between campuses without the hassles of standard commercial aviation. Additionally, Washington has an established aviation ecosystem worth $70 billion with some 130,000 workers ready to embrace AAM, as well as electric aircraft companies such as magniX, ZeroAvia, Eviation Aircraft, and AeroTec.

But challenges face the AAM industry—from the pace of regulatory changes and aircraft certification, the instability of funding coming into the industry, the uncertainty as to public acceptance, the cost of required infrastructure and questions concerning how it will be funded, the timing of future revenues and how this will impact the overall business case. This is a challenging time for the AAM industry as well as governments as they bet on which investments they should make based on the impact they will have on their constituents. The situation requires a team of experts in a multitude of industry segments as well as robust modeling of the future looking at many different scenarios to make the best decisions possible to unlock the potential of this new technology while mitigating the risk of ineffective investments.

Figure 2 - Similar to this vertiport concept for the U.K., Washington State will require new facilities in urban, suburban, and rural locations, as well as GA and major airports.

Our combined team of experts has the **unique experience and know-how** to create Washington State's Air Mobility Aircraft Plan. **NEXA** and **NUAIR** (the Northeast UAS Airspace Integration Research Alliance, Inc.) just completed a major AAM implementation project for the Kingdom of Saudi Arabia. NEXA, experienced in establishing P3s that have financed FAA ATC infrastructure, also regularly provides jurisdictions with Economic Impact Assessments and along with its subsidiary **UAM Geomatics, Inc.,** has a gold-plated client list including the DOT, GAO, NASA, several US states and multiple eVTOL OEMs. NUAIR is an FAA UAS and AAM testing site with experience in AAM policy, regulations, integration, and route planning. **Yolanka Wulff**, Executive Director of the Community Air Mobility Initiative (**CAMI**) based in Washington State, is an expert advocate for AAM accessibility, equity, and diverse workforce development. Together with Washington's Department of Transportation, we can help Washington State successfully bring about this **revolutionary mobility transformation.**

Our Understanding

Studies by such industry sources as McKinsey, Goldman Sachs, and Morgan Stanley predict that AAM will become a trillion-dollar global industry. The market opportunities are huge.

Each State or region has unique AAM needs based on a complex blend of current transportation issues, congestion, population density, airports, transportation infrastructure, regulation, medical infrastructure, business aviation, GDP, local politics, per capita income, and a host of other factors. Let's take a look at Washington.

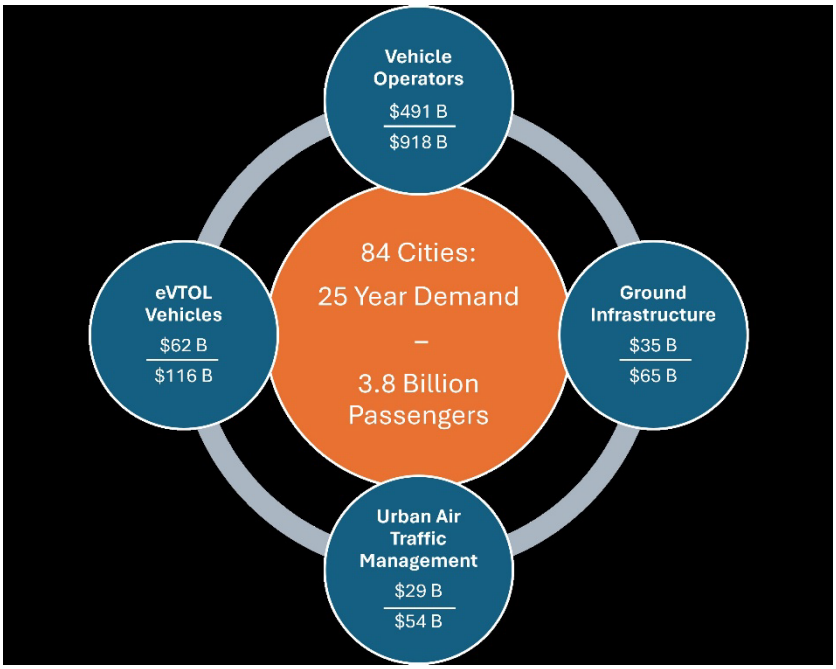


Figure 3 – UAM Geomatics' forecasts through 2045 for global AAM for 84 cities. In the blue circles (the four supply chains) the top figure is revenue production while the bottom is economic impact.

Integrating AAM into Washington State's Existing Transportation System

Washington State has an extensive preexisting transit, ferry, and highway infrastructure, and when planning AAM, the interconnectivity between existing infrastructure and future infrastructure is vital. Using Big Data from cell phones can identify travel patterns of existing transportation modes to determine optimal locations for vertiports at pivotal points.

In addition to light rail, Sounder lines, and Amtrak lines, the State is planning a 413-mile, $40 billion, high-speed (250 mph) rail system connecting Vancouver, Seattle, and Portland. Washington has 7,000 miles of state highways and ten ferry routes (20 terminals, 18 million passengers annually, more than 43,000 average a day.) The Seattle-Bainbridge Island ferry had 4.8 million riders in 2023, the Mukilteo-Clinton 3.7 million. There are also 700 miles of bicycles routes and an extensive bus system.

Washington has 12 commercial airports, all with the technological capabilities to add electric aircraft operations, as well as approximately 140 general aviation airports. Airports are the logical starting point for electric aircraft passenger transportation, which includes eVTOLs (electric Vertical Takeoff and Landing,) eSTOLs (electric Short Takeoff and Landing,) and ECTOLs (electric Conventional Takeoff and Landing).

While the FAA carefully considers new regulations for air traffic management systems for low-altitude flights over and around cities, current airport air traffic control systems are already in a position to add electric aircraft to the mix. Airports have not only a regulatory advantage with regard to AAM but also a financial advantage. The cost of creating a vertiport at an airport will be much lower than building a vertiport from scratch, for instance, on top of a downtown parking garage. Many airports already have helipads that can be converted into vertiports at limited cost.

Important AAM Use Cases

AAM services are generally organized around use cases, to better forecast future passenger demand and ticket prices:

Airport shuttle: Residents of well-populated suburbs as well as those in rural locations may wish to take a short electric flight to a major commercial airport rather than ground transportation.

Regional air mobility: Sea-Tac Airport is at capacity, with no possibility for expansion. In 2023, the 50-year-old facility—originally designed for 30 million passengers—served over 50 million passengers. With the advent of electric aircraft, smaller airports across the State can meet the needs of the traveling public, many of whom drive several hours to a large commercial airport.

On demand air taxi: While large cities have traditional public transportation systems such as metro, bus, taxi, and Uber/ Lyft, AAM would provide similar services but with faster response and transportation time. Travelers could order an aircraft on their phone, go to the nearest vertiport, and fly over city traffic to their destination in a few minutes.

Tourism: Electric aircraft are likely to become popular with tourists looking for adventure as they visit Washington's three national parks, 140 State parks, the San Juan Islands, Puget Sound, and many other popular destinations. In 2022, 102.2 million visitors spent $22.1 billion, supporting 221,393 direct, indirect, and induced jobs. Instead of spending several hours driving from one location to the next, tourists will have the option of hopping in an eVTOL or eSTOL for a short, quiet flight and see a great deal more of the State during their visit.

Corporate campus/business aviation: Corporate campuses offer another attractive location for vertiports supporting AAM traffic due to the high concentration of demand for quick, flexible, cost-effective transportation to other corporate campuses or transportation hubs such as airports. These vertiports will be fitted with the necessary instrumentation to integrate into the current NAS similar to the way that heliports do.

Medevac and medical transport: eVTOLs used for Medevac offer many advantages. Due to lower costs and less noise, there will likely be more of them available (sometimes Medevac helicopters are not available.) They will likely be far less expensive, and the Medevac patient, even if he or she has insurance, often gets stuck with a bill of tens of thousands of dollars. It is likely that some hospitals which no longer use their heliports due to community noise concerns

will open them back up for eVTOLs. Also, an eVTOL starts up almost immediately and can get to the destination more quickly than a helicopter, which can take up to 11 minutes to prepare for takeoff.

Cargo and logistics: The integration of electric aircraft cargo operations into existing modes of transportation presents a transformative opportunity for the logistics industry. Electric cargo aircraft offer the potential to revolutionize the delivery of goods, especially from remote locations to regional hubs, by providing efficient, rapid, and environmentally friendly transportation solutions.

Natural Disaster Response: The Pacific Northwest is an area of intense seismic activity with risk of earthquakes and volcanic eruptions. If roads and bridges render an area unreachable, eVTOLs will be able to assess damage and assist residents.

Universal Benefits of AAM

The WSDOT RFQ refers to specific advantages of AAM that the State can look forward to. The NEXA team discusses these and adds several more to the mix:

- **Faster travel times:** Data shows that the population growth in Washington State has created a significant congestion issue that, although briefly relieved by the COVID-19 pandemic, has continued to increase over the years. In 2017, a total of 72 of the 88 (82%) major commuting routes had congestion with an average increase in travel time of 45% as measured by the Maximum Throughput Travel Time Index (MT3I).[1] It is expensive—and often physically impossible—to build new lanes. AAM, when used in conjunction with other transportation solutions, can offer targeted relief for congested areas—particularly those which might cause health and safety impacts, such as delays in first response times.
- **Enhanced emergency response:** Electric aircraft offer an advantage over other aviation-based alternatives such as helicopters as they can be positioned in locations where first responders are located, such as fire stations, due to their increased flexibility and reduced infrastructure needs. The map below shows the State's trauma centers and the average drive time in shades of purple (light purple shows 30 minutes, and darker purple 60 minutes) and flight times (light blue 30 minutes and dark blue 60 minutes.) The difference in range is significant. If eVTOLs were available at these trauma centers, the reachable area within 30 minutes would increase ten-fold over ground transportation, saving countless lives. Additionally, routine patient transfer from one facility to another will be less expensive and quieter than with a helicopter, and more rapid than with an ambulance. We expect local communities to support medical use of eVTOLs.

[1] 2018 Corridor Capacity Report; November 2018, Washington State Department of Transportation

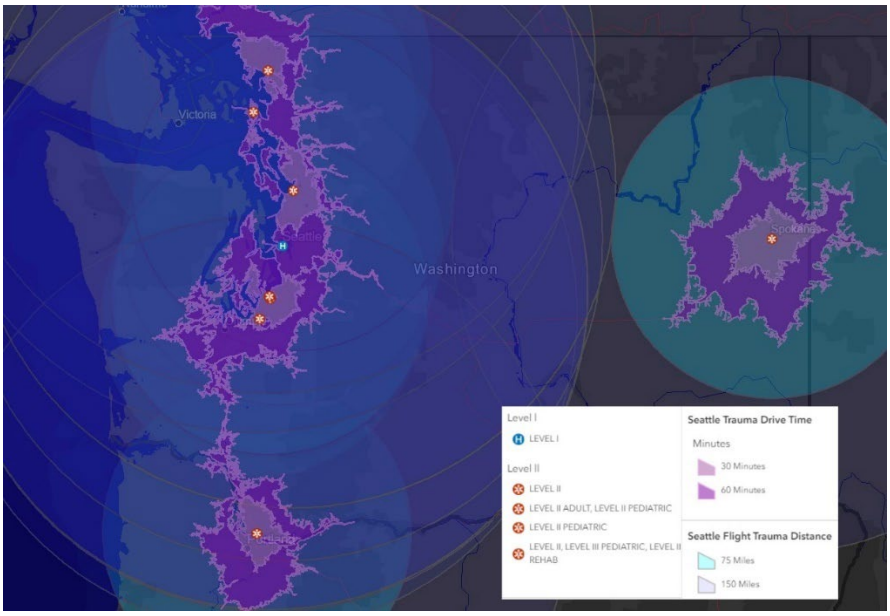


Figure 4 – Drive time versus flight time simulation for Washington residents to access trauma centers.

- **Improved accessibility** – Accessibility is the quality of travel and takes place at the community and individual level through Access Management techniques to provide access to various land uses. It focuses on travel time, travel cost, travel options, comfort, and risk while addressing the needs of all within the community. In order to improve accessibility for all, it is important to look at the impact of AAM through the U.S. DOT STEPS framework which categorizes transportation equity barriers into five categories: **S**patial - physical gaps in a transportation system; **T**emporal – time gaps in the transportation system; **E**conomic – financial challenges to the use of the transportation system including costs, payment methods, and banking access; **P**hysiological – physical and cognitive limitations; and **S**ocial – social, cultural, safety and language challenges.
- **Improved connectivity:** Adding electric flights to the State's existing transportation system will allow more direct travel between destinations and improved time savings, making distances seem smaller, and helping to bridge the rural-urban divide.
- **Reduced emissions** –The aviation industry has long been recognized as a major contributor to greenhouse gas emissions and air pollution, accounting for approximately 2% of human-induced CO2 emissions. Traditional aircraft emit large quantities of carbon dioxide, nitrogen oxides, and particulate matter, all of which contribute to climate change and air pollution. Today's electric aircraft can reduce an estimated 60% of overall aviation emissions.[2]

In addition to those benefits cited in the WSDOT RFQ, we add several others:

- **Affordability –** The dimension of affordability has two axes: Infrastructure funding and passenger convenience/value. These are important to understand funding needs and can be quantified when NEXA's business case algorithms are applied.
- **Expand rural mobility/accessibility:** In Washington, 30 of its 39 counties are considered to be rural, statutorily defined to be a county with population density less than 100

[2] https://www.sciencedaily.com/releases/2024/01/240123122145.htm

persons per square mile or a county smaller than two hundred twenty-five square miles.[3] Advanced Air Mobility may provide passenger mobility, goods delivery, and emergency services to rural areas, as well as connections to urban areas and hub airports – trips that currently depend for the most part on long distance automobile travel.

- **Increase Washington State aerospace sector profitability:** The State has 1,500 aerospace-related suppliers and vendors and the largest aerospace supply chain in the US, as well as several electric aircraft manufacturers. Supporting AAM, these firms will expand jobs and income.
- **Unique Island residence needs** - San Juan Islands Archipelago is in the heart of the Salish Sea, just north of Seattle, with some 19,000 residents. These have no bridges; transportation is by ferry or air.
- **Regional Air Mobility benefits for struggling small airports:** AAM will provide feeder routes to smaller airports with commercial service, with the additional demand created by AAM access making it more economically attractive for traditional airlines to provide commercial service.
- **Will complement and not compete with high-speed rail:** AAM is not a form of mass transportation and will never compete in the arena of high-volume passenger transportation for several reasons. High speed rail in high demand corridors will always be more efficient and cost effective than moving similar numbers of passengers with AAM simply because of the number of aircraft required. It is more likely that AAM could provide an augmentation for situations where demand is not sufficient to justify the high infrastructure cost of building high speed rail corridors. AAM will be part of a multimodal transportation system.
- **AAM will offer new transportation options for transportation deserts and underserved communities**: The ability to cost effectively and quickly get aid and support such as critical medical supplies and physicians to more remote locations will help to support underserved and rural communities. Also, the ability to get aid to these remote regions in disaster situations while minimizing the risk to rescue personnel will be enhanced with AAM as an alternative to putting first responders on dangerous ground infrastructure in the event of events like major snow storms or severe damage to road infrastructure.

[3] https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/population-density/population-density-and-land-area-criteria-used-rural-area-assistance-and-other-programs#:~:text=In%20this%20legislation%2C%20%22rural%20county,for%20tax%20and%20other%20assistance

Critical AAM Challenges Washington State Must Address

While AAM offers many potential benefits, there are also some challenges that need to be addressed before it can become a reality, and our team stands ready to assist. These include:

- **Safety:** Ensuring the safe operation of AAM vehicles is paramount. All vehicles and infrastructure will be required to meet appropriate FAA certification and standards requirements consistent with the same level of safety required today. The ability of the vehicles and infrastructure to meet these requirements will be thoroughly tested in the presence of independent observers just like traditional aviation. The means of compliance developed for new technology will be based on existing functional requirements with equipment and software certified to the associated regulations.
- **Aviation regulation:** New regulations will need to be developed to govern AAM operations. This process is already underway for UAS with some of the lessons learned being carried over to AAM. Additionally, many current regulations will be easily adaptable from existing regulations given the similarity to current helicopter and general aviation. Several AAM aircraft manufacturers are currently well along in the initial certification process, utilizing existing regulations with adapted means of compliance. This model will provide a bridge while specific regulations are developed for AAM aircraft.
- **Land Use Planning and local regulations:** To be effectively incorporated into a multimodal transportation system, AAM as a mode must be integrated into local and regional planning processes, such as comprehensive plans and transportation plans. This allows an examination of how AAM intersects with land use compatibility, zoning, conditional use permits, building and fire codes, policies, and other regulations, as well as methods for funding.
- **Infrastructure:** Developing vertiports in Washington for AAM operations poses challenges in infrastructure planning, land use, and community integration, especially considering that vertiports will vary in size and capacity. Overcoming logistical, operational, and regulatory hurdles, including airspace management and safety compliance, is crucial for realizing the potential of urban air transportation in the State.
- **Public acceptance:** Within industry, there has been some concern about public acceptance, focused primarily on the noise and safety risks associated with AAM. These concerns are certainly valid, but there are others as well, including visual pollution, privacy, social equity, personal safety, location of vertiports, routing and timing of flight paths, range anxiety and future autonomous flight. Addressing these challenges requires both an implementation approach that includes broad public benefits, as well as a robust education and outreach plan.
- **Airspace and AAM Network Design:** Airspace design will follow basic principles for helicopter and GA aircraft in the early days of piloted AAM with existing ATC requirements in both controlled and uncontrolled airspace. As some routes become

more consistently travelled, ATC will start to generate "standard" flight paths that AAM will be able to plan and fly with minimal planning time and still allow for deviations as necessary for traffic and weather conditions.

- **Selecting first AAM routes and use cases**: Route and use case selection must be done with sensitivity to operator profitability (which includes demand), social benefits (such as improved healthcare outcomes, new jobs, more convenient transportation options, and greater rural-urban connectivity), and accessibility/equality (helping underserved communities.) The State's AAM plan will be judged by these first choices which must consider all of the above. Washington State needs to address these challenges by developing a roadmap for integrating AAM into the State's current transportation system.

Development of Roadmap to Integrate AAM into the State Transportation System

With careful planning and investment, AAM has the potential to revolutionize transportation in Washington State. The NEXA team proposes to develop a roadmap for integrating AAM into the State's transportation system. This plan will be developed through thorough collaboration with all stakeholders to ensure that inputs and areas of policy, regulatory and commercial matters are considered.

As shown in the schedule section, the plan will be developed in such a way that WSDOT has ample time to provide feedback and revisions are made timely. This way WSDOT can submit the report to the Office of Financial Management and Transportation Committees for the Legislature no later than June 1, 2025. Our work will address:

Vertiport Land Use Planning

Task: Near, medium, and long-term recommendations for land use planning for advanced and urban air mobility vertiports and vertistops.

Once a likely vertiport site is identified, local, state, and federal regulations will come into play. Vertiport planners will need to examine:

- Federal airspace regulations
- Ground obstacles and constraints like communication towers, commercial buildings, and electric substations
- Zoning regulations
- Noise Impact
- Public sentiment
- Land ownership and existing development

Some factors such as public sentiment, noise impact, and land ownership will require boots-on-the-ground surveying to determine if they will impact vertiport integration at that location.

Identify and Inventory Infrastructure Needs

Task: An inventory of infrastructure needs to support a statewide vertiport network and a recommended land use and development program to deploy funds to local governments to share costs.

Creating an inventory of infrastructure needs involves asking the following questions:

- What aviation infrastructure (airports, heliports, and corresponding air traffic control systems) are already in place, requiring relatively few physical upgrades and regulatory modifications? Such currently existing infrastructure will save money compared to building greenfield vertiports.
- What cities have the greatest population and most traffic congestion?
- How many hospitals are in the area, and which of those are level one or two trauma centers?
- Are there sufficient manufacturing facilities and logistics centers that would use drones/cargo electric aircraft for greater efficiency?
- Is there sufficient grid capacity and distribution to charge the electric aircraft?

An in-depth analysis of existing assets—and how they would interact to create an AAM network—is required before assessing the construction of new assets.

In terms of recommending **a program to deploy funds to local governments to share costs,** we must develop a formula based on estimated infrastructure costs for each local government in five-year periods through 2045, which in turn is based on forecasted passenger demand, number of vertiports to be built, and new versus existing infrastructure that only needs remediation.

Governance Structures and Regulatory Mechanisms

Task: Proposed state governance structures and regulatory mechanisms to adequately complement Federal Aviation Administration oversight.

The team has advised several governmental organizations at various levels (state, municipal, federal, international) on the governance approach to managing the growth and operations of AAM. Our approach starts with a strong understanding of the federal regulatory framework, both currently as well as what it is likely to be in the future. The fact is, at this point there have been very few specific regulations passed around AAM. Although that will change as the industry evolves, the FAA has taken an approach that leverages the flexibility of current regulations to be adapted on a case-by-case basis. Our strategy will be to work with Washington DOT to define a time-based strategy for the desired outcome, which will initiate an analysis of

the current and likely future regulations. From this baseline, the team will identify areas where Washington State can operate within those regulations and accomplish their objectives. The federal regulations, although highly structured, allow for advanced technology insertion and operations so long as the proposed operations are deemed to have the appropriate level of safety and integrate with existing air traffic management rules. This allows for a fairly wide range of possibilities which the team will explore and discuss with the state.

From a governance standpoint, the team will work with WSDOT to understand the current structure including specific roles and responsibilities in developing aviation and related infrastructure in the state and the overall strategy for implementation developing some options for assessment. The key aspects of an effective governance structure are assuring the appropriate scope of oversight to achieve the objectives and the authority to implement new initiatives in a timely manner. We must consider the best organizational location for the addition of AAM development and operations. For example, placing the responsibility in the Aviation group (under the Undersecretary of Multimodal Development and Delivery) might seem like the most logical location at first glance.) However, considering AAM as more of an impact on urban mobility, might lead to the logical positioning under Megaprograms & Urban Mobility & Access. The team will work with WSDOT to explore the pros and cons of these and other organizational options to arrive at a decision that best suits WSDOT, as we did setting up the AAM governance and regulatory mechanisms for the Kingdom of Saudi Arabia.

Vertiport Policy Development

Task: Recommended policies to foster vertiport and vertistop infrastructure development that ensure open public access, efficiency in land use siting, and equitable distribution across the state.

In response to the task of developing recommended policies to foster vertiport and vertistop infrastructure development in Washington State, our proposal focuses on ensuring open public access, efficiency in land use siting, and equitable distribution across the state. To achieve these objectives, the proposed policies will prioritize collaboration between government agencies, private sector stakeholders, and local communities. (For instance, State and local regulations regarding land use and zoning will also come into play.) This collaboration will involve comprehensive stakeholder engagement processes to gather input and feedback, ensuring that the policies reflect the diverse needs and perspectives of all parties involved. Additionally, the policies will aim to streamline regulatory processes and provide clear guidelines for vertiport and vertistop siting, considering factors such as airspace considerations, environmental impact assessments, and community zoning regulations.

Furthermore, the proposed policies will promote transparency and accountability in the development process, including mechanisms for public oversight and community input at various stages of planning and implementation. By fostering a supportive regulatory environment that encourages innovation and investment in urban air mobility infrastructure,

Washington State can position itself as a leader in the emerging field of advanced air mobility while ensuring equitable access and benefits for all residents. Another consideration here is safety: vertiports must be responsive to new building and fire codes.

Electric Aircraft Integration Planning

Task: In consultation with local jurisdictions, planning organizations, and other modal managers, recommendations on advanced air mobility aircraft integration into statewide transportation plans.

Getting buy-in from local stakeholders is critical to making good decisions on the future implementation of AAM. The locals are the only ones who truly know the obstacles that are limiting segments of the population and the community as well as the potential impacts specific implementations will have on the community. The team will reach out to community leaders as part of the study to get their direct input on opportunities and concerns within their communities as input to the recommended approach. This will start with a small number of representative communities to get a perspective on how these inputs vary by community type. We will collaborate with WSDOT on the selection of the specific communities engaged and the personnel within these communities that are best able to provide diverse yet specific input.

Evaluation Criteria

Evaluation Criterion 1 – Qualifications of Firms on NEXA Team

The NEXA Team is comprised of four organizations, shown in Figure 5 below. Each firm's deep AAM expertise compliments the requirements of the overall WSDOT effort, from policy to finance to aviation regulations, multimodal integration, technical matters such as airspace design and vertiport location, GIS expertise, market research and business case analysis, community integration, stakeholder outreach and legislative support, etc. The NEXA team has several years of work experience working with one another in the AAM field in various states and countries.

The NEXA team has all the qualifications cited in this RFQ. We are confident that you will be highly satisfied with our work.

> **Deep professional experience -** The collective team brings deep policy, regulatory, business, financial, and technical skills to the table. We are credentialed in AAM related areas and bring a citable reputation to this effort. The top four NEXA Team members each has over 30 years of senior level managerial experience in commercial and civil aviation, and most recently Advanced Air Mobility.

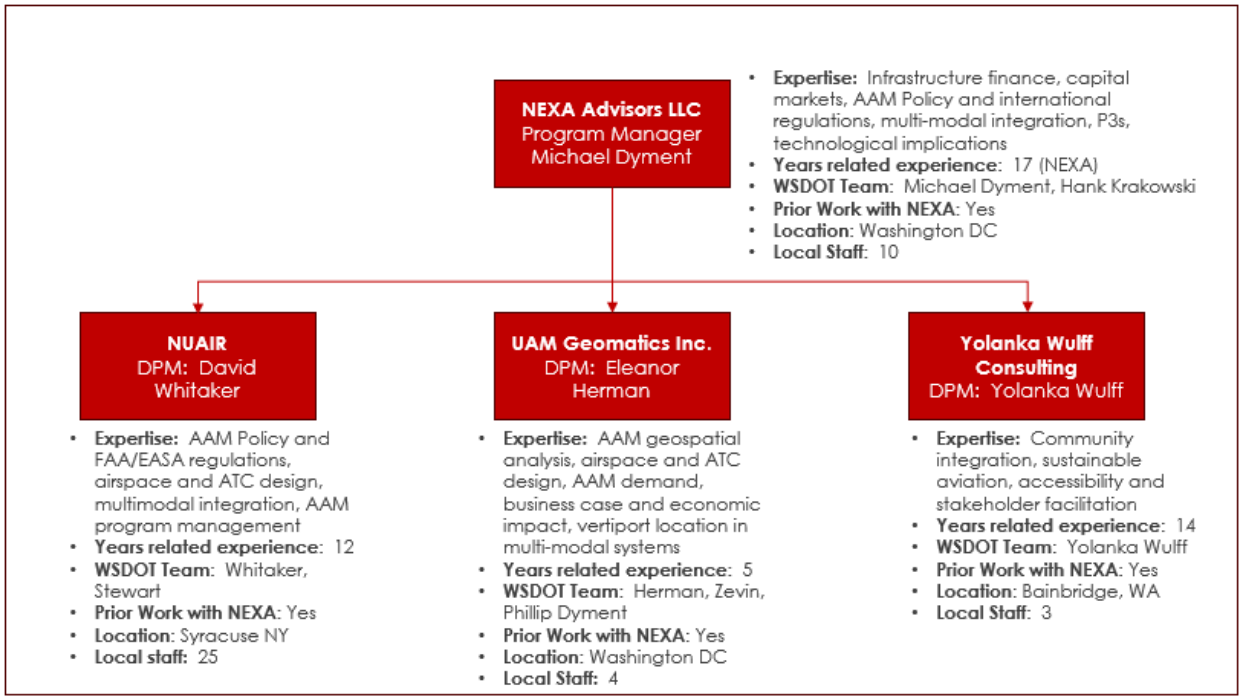


Figure 5 - The NEXA Advisors team brings a full complement of deep expertise to assist WSDOT and the Air Mobility Aircraft Plan Development

- **Team familiarity -** The NEXA team has already worked together successfully on numerous AAM engagements for federal, state, and local governments as well as financial institutions and private industry.
- **Client interaction -** With DOT clients such as WSDOT, we work as a part of their team, providing constant access, regularly scheduled meetings, one-on-one sessions, ensuring our travel commitments support the client.
- **Outreach -** The importance of stakeholder identification and engagement cannot be overstated, and we have a strong reputation in the AAM sector that will help enormously with outreach.
- **Community engagement tools –** As executive director of CAMI, Yolanka Wulff co-led a project to develop a community engagement primer and toolkit for municipalities and airports.[4] This project was funded by the Airport Cooperative Research Program of the Transportation Research Board. The resources were published by the National Academies of Science, Engineering, and Math, and include a guidebook entitled **Advanced Air Mobility and Community Outreach: A Primer for Successful Community Engagement**, as well as a toolkit that contains a stakeholder engagement roadmap, a reproduceable fact sheet, a presentation slide deck with talking points, and a stakeholder self-assessment survey. Our team can customize these materials for use by WSDOT.

[4] https://nap.nationalacademies.org/download/27627

The resumes and bios in sections below will cite specific areas of fit with your project needs.

Unique Tools and Capabilities

The NEXA team will bring to this project several unique and proven tools and capabilities utilized by other governments, states, cities, and countries:

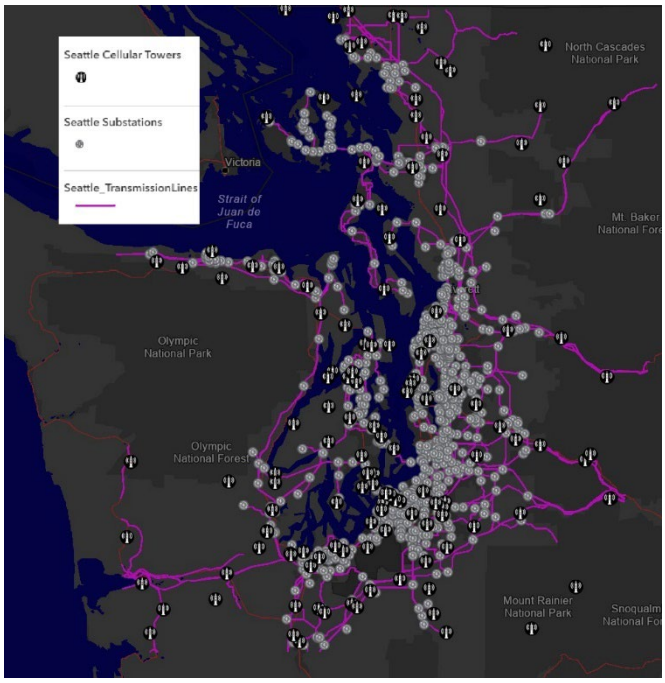


Figure 6 – Seatle power distribution infrastructure and Cell Tower map on our UAM Geomatics ArcGIS website.

AAM ArcGIS platform – UAM Geomatics, a subsidiary of NEXA, has provided detailed ArcGIS inventories of up to 50 layers of AAM-related infrastructure (airports, heliports, ports, current transportation modes, hospitals, zoning, demographics, manufacturing and logistics centers, major cargo routes, power stations, cell towers, Fortune 1000 employers, fire and police stations, etc.) for 92 cities globally (42 in the U.S.), as well as 7 US states, using an interactive online platform (www.nexa-uam.com). More than 100 companies and agencies have subscribed to and are using these services for their AAM planning purposes. Powerful benchmarking capabilities are one of many service benefits.

- **Passenger and cargo demand forecasting —** We have been using advanced passenger demand forecasting with multi-factor identification for urban and regional areas, applying price elasticity algorithms originally developed for NASA AAM programs. Our model is a bottom-up forecast, beginning with data specific to the state or metropolitan area being focused on. This includes forecasted passenger demand from AAM mobility solutions, as well as ticket pricing, for five use cases that will drive the passenger AAM experience. Our forecasts were used by the US Government Accountability Office in a recent AAM report to Congress. The GAO stated that NEXA/UAM Geomatics offered the most reliable long-term projections in the industry.
- **AAM business case tools and models –** NEXA Advisors has developed sophisticated business case analytic tools to assess feasibility of AAM within specific geographies such as Virginia, Arkansas, Ohio, and New York, U.S.-wide and internationally. We assess four critical value or supply chains (ground infrastructure, air traffic management, aircraft, and operators) over 25-year forecast periods to estimate passenger demand by use case, and infrastructure CAPEX/OPEX. We use pillar tables, cash flow waterfalls, and PPP modeling so that multiple investment options can be studied years in advance of AAM operations.

- **AAM economic impact model –** NEXA Advisors has a contractual partnership with IMPLAN, a widely used economic impact tool developed under the direction of the United States Forest Service (USFS). IMPLAN forecasts job creation including direct, indirect and induced employment. NEXA extends this analysis to evaluate catalytic impacts of improved mobility, for example with tourism or logistics.
- **Airspace modeling capabilities –** Team partner NUAIR has a decade of experience testing simulated airspace and traffic routing options and assessing them in real-world scenarios, various traffic density conditions, and various airport and infrastructure configurations. We have the ability to engage with ATC personnel to obtain their feedback in environments that they understand and work with every day.
- **Vertiport location tools –** For a region to have a successful AAM system, vertiports must be placed in optimal locations that consider passenger efficiency and the operational constraints of eVTOLs. UAM Geomatics, Inc. developed a vertiport locating tool utilizing the power of ArcGIS and the GIS datasets created in its landmark study, **Urban Air Mobility: Infrastructure and Global Markets 2024-2045**, capable of locating passenger or cargo focused vertiports
- **Regulatory expertise –** NEXA has worked in aviation policy for over 30 years, while NUAIR has been influencing regulatory policy progression around uncrewed aviation for over 10 years through its participation in numerous standards committees and Advisory and Rulemaking Committees (ARCs) which are the industry-led precursors to new regulations and rulemaking. As a not-for-profit, NUAIR has provided unbiased input to the process to benefit all users while maintaining the current level of aviation safety. Many of these unique and proven tools are detailed in Packet B of this submission.

The table directly below provides availability of key staff and resources for each firm on the proposed project team. The availability of staff is identified as hours available per month for the length of the project.

Firm	Consultant	Maximum Availability (Hours/Month)
NEXA Advisors	Michael Dyment	32
	Hank Krakowski	20
	Phillip Dyment	60
UAM Geomatics	Eleanor Herman	80
	Ben Zevin	60
NUAIR	David Whitaker	32
	Ken Stewart	12
	Other	TBD
YW Consulting	Yolanka Wulff	40
	Other	TBD

The table below provides projects that each firm on the NEXA project team has completed within the last three years. The projects demonstrate the required expertise needed for the WSDOT project.

Firm	Project Name	Applied Expertise and Services	Year and Approximate Project Value
NEXA Advisors	Ohio DOT AAM Industry Strategy	• Geospatial mapping of state-wide AAM features, AAM outreach, multimodal integration, business case analysis, economic impact analysis, and legislative preparations (More detail in Packet B) • Team included UAM Geomatics, NEXA, Crown Consulting and Yolanka Wulff	• 2022 - 8 month duration • Project cost $1M
NEXA Advisors	Virginia VIPC AAM Planning and Roadmap	• Geospatial mapping of state-wide AAM features, AAM outreach, business case analysis, economic impact analysis, PPP discussions and legislative preparations (More detail in Packet B) • Team included NEXA, UAM Geomatics Inc., Drone Economics Inc. and Yolanka Wulff	• 2022/2023 – 9-month duration • Project cost $250K
NEXA Advisors	Oklahoma DOT AAM Strategy and Blueprint	• Geospatial mapping of state-wide AAM features, AAM outreach, business case analysis, economic impact analysis, PPP discussions and legislative preparations (More detail in Packet B) • Team included NEXA, UAM Geomatics Inc., and Drone Economics Inc.	• 2023/2024 • Project cost $150K
NEXA Advisors	Kingdom of Saudi Arabia (KSA) AAM Strategy and Roadmap	• Geospatial mapping of KSA-wide AAM features, AAM outreach, multimodal integration, regulatory overhaul, business case analysis, economic impact analysis, PPP discussions and legislative preparations (More detail in Packet B) • Team included NEXA, NUAIR, AT Kearney and UAM Geomatics.	• 2023/2024 – 10-month duration • Project cost $2M • Phase 2 will start in June 2024
UAM Geomatics	US Government Accountability Office	• Analysis of AAM impacts on the US Revenue and Tax base • UAM Geomatics made use of NEXA Advisors for specific business case expertise	• 2023 – 3-month duration • $25,000 project cost
UAM Geomatics	Greater Vancouver Region AAM Planning	• Examining use cases, social benefits, and economic impact of AAM	• 2021 • $50,000 project cost

Firm	Project Name	Applied Expertise and Services	Year and Approximate Project Value
		• UAM Geomatics made use of NEXA Advisors for specific business case expertise	
UAM Geomatics	Urban Air Mobility: Infrastructure and Global Markets	Geospatial mapping and forecasts of passenger demand, number of vertiports, CAPEX and OPEX costs, and ticket prices (More detail in Packet B)	• 2018-2024, ongoing • By subscription
NUAIR	Utah Department of Aviation AAM technology integration study	Development of a roadmap for the state to attract economic activity and recommendations for areas of investment to facilitate AAM operations across the state.	2023 – 2024 Included traffic management, authoritative data, surveillance, and weather partners Project cost ~$200K
NUAIR	Kingdom of Saudi Arabia (KSA) AAM Strategy and Roadmap, see under NEXA, above.	(See NEXA Reference Above) (More detail in Packet B)	June 2023 to February 2024
NUAIR	AAM Infrastructure Readiness Study and Workplan, State of California Department of Transportation	Currently serve as sub consultant on this project to evaluate the State of California's readiness to incorporate AAM into the multimodal transportation system and develop a three-year workplan to advance AAM. As a team member on this project, we are responsible for completing a literature review; developing modal facility and route selection criteria with a particular emphasis on equity considerations and disadvantaged communities; contributing to a 3-year implementation workplan, in particular a discussion of legislative actions in other states supporting AAM implementation, and feasible use cases, equity considerations, community outreach and community impact analysis.	Ongoing. Total project value is $200,000.
YW Consulting	Planning for Advanced Air Mobility Guidebook published by American Planning Association	Co-authored the first comprehensive planning guidebook on AAM for transportation, land use, and urban planners. Material was developed through research, case studies, focus groups and expert interviews with heavy reliance on the Community Air Mobility Initiative (CAMI) Urban Air Policy Collaborative cohort program developed and led by CAMI executive director, Yolanka Wulff.	Published 2024. Project was partially funded through a grant from Mineta Transportation Institute, as well as funds from CAMI. Approximate cost to produce the resource was $40,000.

Firm	Project Name	Applied Expertise and Services	Year and Approximate Project Value
YW Consulting	Advanced Air Mobility and Community Outreach: A Primer for Successful Stakeholder Engagement published by the National Academies of Science, Engineering, and Medicine.	Served as co-PI on joint project with Mead & Hunt funded by ACRP (Airport Cooperative Research Program) to develop resources for municipalities and airports to engage in AAM outreach. Through focus groups and case studies, we developed an in-depth primer on AAM and a toolkit that consists of a stakeholder engagement roadmap, AAM stakeholder resources, an educational slide presentation with talking points, and stakeholder surveys.	Published 2024. This project was funded through an Airport Cooperative Research Program grant for $100,000.

About NEXA Advisors LLC

NEXA Advisors is a subsidiary of NEXA Capital Partners LLC, an aerospace investment bank providing corporate and strategic financial advisory services to the aerospace, transportation, logistics and homeland security sectors. NEXA Advisors helps federal, state, and local agencies form economic and regulatory policy to create jobs and GDP growth in the aerospace sector. NEXA also advises the private sector on major programs and initiatives and is known for its work financing ADS-B ground and space-based services. Work recently performed in the AAM sector include projects for the Commonwealth of Virginia, Arkansas, New York, Ohio, and several Canadian provinces and cities. With a specialized staff of about 10 professionals, NEXA Advisors maintains active programs at the nexus of finance and aviation policy.

- Year founded: 2007
- Former or Present Federal Clients: FAA, DOT, DOD,
- Former or Present State/Local Clients: Virginia, Ohio, etc.
- International Clients: Kingdom of Saudi Arabia, City of Vancouver
- Industry Clients: Airbus, Boeing, Embraer, Quest Aircraft, Air Methods, Intel Corp., Joby, Piasecki Aircraft, many others
- Address: 1765 Greensboro Station Place, Suite 900, McLean VA 22102
- Website: www.nexaadvisors.com
- Tel: 202-499-5089
- Federal Tax ID: 26-0488308

About UAM Geomatics Inc.

UAM Geomatics, a subsidiary of NEXA Capital Partners, is a geospatial geomatics expert in Advanced Air Mobility. UAM Geomatics recently completed a global study on Advanced Air Mobility, with a ground-breaking bottom-up evaluation of 92 of the world's largest cities. Over $1 trillion in opportunity has been identified for future operators of electric aircraft, infrastructure developers/investors, and for vehicle manufacturers.

- Year founded: 2018
- Former or Present State/Local Clients: Virginia Innovation Partnership Corporation, State of Oklahoma (through prime HNTB),
- International Clients: Canadian Advanced Air Mobility Consortium, Saudi Arabia, etc.
- Industry Clients: Wisk, Mitsubishi, Mitsui, HondaJet, Joby, Piasecki, Supernal, etc.
- Address: 1765 Greensboro Station Place, Suite 900, McLean VA 22102
- Website: www.nexa-uam.com
- Tel: 202-499-5056
- Federal Tax ID: 84-4904360

About NUAIR

NUAIR has been developing, implementing, and testing uncrewed aviation strategies since its inception in 2012 as well as building a far-reaching partnership with organizations across the industry including users, operators, airborne technology developers, infrastructure suppliers, and perhaps most importantly the regulators at the Federal Aviation Administration (FAA) and their technology partner the National Aeronautics and Space Administration (NASA). NUAIR provides valuable services including independent test and evaluation of UAS and AAM systems, development of airspace integration procedures and tools. Several NUAIR team members proactively support regulatory progression through government sponsored activities including Advanced Rule Making Committees (ARC) and supporting Advanced Airborne Mobility (AAM)-friendly congressional legislation.

- Year founded: 2012
- Former or Present Federal Clients: NASA, FAA, DOT
- Former or Present State/Local Clients: PANYNJ, NYSDOT, NYSTA, NYPA, NYS DHSEs
- International Clients: Unifly, Rigitech, Thales ATM, Kingdom of Saudi Arabia
- Address: 250 Harrison St, Suite 201, Syracuse, NY 13202
- Website: www.NUAIR.org

About Yolanka Wulff Consulting (YWC)

Yolanka Wulff Consulting has fourteen years of experience developing and implementing programs to promote sustainable aviation and urban/regional on-demand air mobility. We have worked internationally with industry, government, academia and other organizations on policy, standards and regulations, industry development, market challenges, communications, community engagement and public education. For the past five years, principal Yolanka Wulff has served as executive director of the Community Air Mobility Initiative, or CAMI, a public nonprofit whose mission is to support the sustainable and responsible integration of advanced air mobility (AAM) into daily transportation systems through education, communication, and collaboration. Yolanka is responsible for CAMI's programs including the development of topical resources, webinars, conferences, and collaborations. She leads the development and

implementation of CAMI's Urban Air Policy Collaborative, a program that brings state and local agencies and public airports together in a ten-session cohort program with an extensive curriculum in planning and preparing for AAM (see participants below). Through the cohort program and associated forums with industry, CAMI is leading the development of model policies and best practices for community integration of AAM. Yolanka is the co-author of three significant AAM resources published by NASA, the American Planning Association, and the National Academies of Science, Engineering, and Math respectively (see details below).
Publications:

- Co-author: Cohen, Adam, Susan Shaheen, and Yolanka Wulff. (2024). "Planning for Advanced Air Mobility." American Planning Association, https://www.planning.org/publications/report/9286262/
- Co-author: Thompson, Maranda, Lisa Harmon, Gemma Gibbons, Krista Robertson, Yolanka Wulff, Adam Cohen. (2024) "Advanced Air Mobility and Community Outreach: A Primer for Successful Stakeholder Engagement." Airport Cooperative Research Program, https://nap.nationalacademies.org/download/27627
- Co-author: Cohen, Adam, Shahab Hasan, Nancy Mendonca, and Yolanka Wulff. (2023). Advanced Air Mobility Community Integration Considerations Playbook. National Aeronautics and Space Administration (NASA). https://ntrs.nasa.gov/citations/20230010184

Other merits and honors:

- UAPC Cohort Participants: WSDOT Aviation (twice), Port of Seattle, King County Metro, California State Transportation Agency, Georgia Dept of Transportation, Massachusetts Dept of Transportation, Michigan Dept of Transportation, North Carolina Dept of Transportation, Oregon Dept of Aviation, Ohio Dept of Transportation, Utah Dept of Transportation, North Central Texas Council of Governments, Monterey County (CA), Orange County (FL), City of Huntsville, Los Angeles Dept of Transportation, City of Marina (CA), City of Minneapolis, City of Orlando, City of San Jose, Augusta Regional Airport, Tampa International Airport, Massport, Tampa Bay Area Rapid Transit Authority, Choctaw Nation, Canadian Advanced Air Mobility Consortium, Monterey DART
- AAM Advisory Committees for the states of WA, PA, IL, and the cities of San Jose, Miami, and Orlando
- FAA Advanced Aviation Advisory Committee member
- Transportation Research Board New Users of Shared Airspace committee member
- Vertical Flight Society board member

Other information:

- Year founded: 2010
- Address: PO Box 11162, Bainbridge Island, WA 98110

- CAMI website: www.communityairmobility.org
- Tel: 206-660-8498
- Federal Tax ID: 99-2207023

Yolanka Wulff Consulting has applied for MSVWBE participation. NEXA states that this proposal will be subject to a 26% MSVWBE goal using YWC as its contributor. YWC will be required to submit an approved MSVWBE Participation Plan for approval prior to commencement of work.

Evaluation Criterion 2 – Qualifications of Project Manager

Project 1: Kingdom of Saudi Arabia AAM Strategy and Roadmap

- **Date**: July 2023 to March 2024 (9 months)
- **Name of client/organization:** General Authority of Civil Aviation of the Kingdom of Saudi Arabia. GACA, the KSA equivalent of FAA or UK CAA, was given responsibility by the government to develop a national blueprint to bring all four value chains of AAM to the country. This included ATC, vertiports, and multimodal operations, manufacturing, flight operations (Part 135 equivalent) and new regulations modeled on evolving FAA FARs and EASA AAM certification programs.
- **PM responsibilities**: NEXA Advisors was responsible for the team developing the regulations, policies, and business case for a comprehensive AAM mobility architecture, ultimately to recommend detailed regulatory changes to the country's national and local regulations to clear the way for rapid AAM progress. The project led to GACA choosing to rebuild its current organization and book of civil aviation regulations and seeking initial financial commitments of $3 billion to proceed. NEXA worked in parallel with other consultants, including NUAIR, UAM Geomatics, and prime AT Kearney, as our expertise and that of NUAIR were highly complex, requiring multi-level policy considerations as aviation is heavily regulated and must be harmonized with all other modes of transport within the Kingdom, as well as across international borders. At all times we demonstrated good skills in communication, team management, time management, risk management, problem-solving and budget management. Our work, briefings and reports were prepared and advanced to regulators and policy makers supporting legislative bodies at all levels, federal to local.
- **Demonstrate familiarity with state and federal regulations**: NEXA and NUAIR were subject matter experts to the Saudi government on state-level and federal aviation regulations. The critical regulatory factor of importance was the Saudi government's need to model emerging aviation regulations around the FAA FARs. Our team brought a deep understanding of the evolving nature of US FAA FARs and AAM program impacts, as those AAM programs where FAA had jurisdiction or leadership (airworthiness, electric propulsion, etc.) were evolving almost weekly.
- **Scope of Work and Scope Creep:** NEXA and NUAIR brought 6 consultants to a larger team of about 6–8 other consultants, while GACA brought in over 10 senior and middle

level staff. Other government departments were consulted regularly, including municipal and federal agencies, the air traffic control provider SANS, public transport provider and national investment fund. Project scope creep was minimal managed effectively, although the term went from 7 to 9 months due primarily to gates through which initial go/no go decisions were needed from outside GACA. We used Microsoft Project management tools and PMP disciplines to maintain this schedule and multi-million-dollar budget.

- **Describe budget issues:** Other than international travel costs which were escalating, there were no budget issues. The project was performed on a fixed price basis.
- **Changes to project:** All changes were incorporated into a Phase 2 program plan which is projected to start in June 2024.

Project 2: Virginia AAM Program

- **Date**: July 2022 to January 2023 (7 months)
- **Name of client/organization:** Virginia Innovation Partnership Corporation (VIPC) funded through the Virginia Secretary of Commerce and Trade. This is a business/investment case and economic impact study focused on new air transportation and technology options to merge Advanced Air Mobility (AAM) into the State's transportation system. The state expects AAM to have transformative societal and economic benefits. Audiences are legislators, municipal and government agencies, airport, transit and social policy experts, the aviation and tech industries, research organizations, the media, universities, and residents of the Commonwealth of Virginia.
- **PM responsibilities**: NEXA Advisors was responsible for organizing and managing the team comprising VIPC, UAM Geomatics, Drone Economics, George Mason University, airport managers, and several state agencies including VDOT, as well as stakeholder groups. Although the geographic scope was Virginia, the program pulled in the District of Columbia as its economic linkage to the State is enormous. The wide casting for stakeholders created many challenges. At all times we demonstrated good skills in communication, team management, negotiation, interpersonal skills, project management methodologies, policy knowledge, conflict management and budget management. Our work, briefings and reports were prepared and advanced to policy makers supporting legislative bodies at all levels, federal to local.
- **Demonstrated familiarity with state and federal regulations**: NEXA and UAM Geomatics brought deep subject matter expertise to the project on Virginia and federal aviation regulations. Having VDOT and its aviation department on the team was essential, and stakeholder groups already investing in UATM infrastructure brought additional policy and regulatory views and challenges.
- **Scope of Work and Scope Creep:** NEXA and UAM Geomatic brought approximately 4 consultants to a larger team of another 2 consultants while VIPC brought in several part-time experts, senior and middle level staff. Other federal (FAA, DOT) as well as state

government departments were consulted regularly, including municipal airports and ATO, the FAA air traffic control provider. Project scope creep was not a problem, although the term went from 6 to 9 months.

- **Describe budget issues:** There were no budget issues. The project was performed on a fixed price basis and term length adjustments were effectively managed to client satisfaction.

Accreditation of PM

The program manager Michael Dyment has demonstrated capability in the realm of complex program management, as prior to NEXA he has been a partner in several major consultancies (PwC, Arthur Andersen, AT Kearney, Booz Allen Hamilton) and managed in excess of 120 major projects for exacting clients, some programs as large as $10 million and involving dozens of professionals. While at NEXA his PM skills have been successfully demonstrated in over 40 engagements since 2007.

Evaluation Criterion 3 – Key Team Member Qualifications

Michael J. Dyment, Managing Partner, NEXA Advisors LLC

Mr. Dyment is the Founder and Managing Partner of NEXA Capital, an investment banking and corporate finance advisory firm that helps clients develop effective enterprise value strategies. A highly experienced aerospace and defense industry consultant and trusted financial advisor to top management, he has over 35 years operational, M&A, Public Private Partnership and corporate finance experience. He is also Managing Partner of consultancy NEXA Advisors, and a director with NEXA subsidiary UAM Geomatics Inc. He is an emerging thought leader on advanced air mobility and its coming impact on urban and rural areas of the world.

Prior to founding NEXA Mr. Dyment was Senior Managing Director with Pricewaterhouse-Coopers LLP, responsible for key aerospace and defense industry clients. He was also an Officer and Vice President of the Transportation Practice of A.T. Kearney, Inc. From 1996 to 2002 he served in the business consulting unit of Arthur Andersen LLP, where he was the global managing partner of its Aviation Industry Practice. In the early 1990's he was a Principal with Booz Allen & Hamilton, Inc. and led its Washington DC based Civil Aviation Practice, a unit of the worldwide technology business.

Prior relevant projects:

- **State of Virginia AAM Planning** (See Packet B): In 2022/2023 NEXA and CAMI (Yolanka Wulff) developed comprehensive programs to prepare the Commonwealth for introduction of AAM in its many value chains over the next few years.
- **Kingdom of Saudi Arabia GACA National AAM Strategy** (See Packet B): In 2023/2024 NUAIR and NEXA Advisors advised the GACA (KSA equivalent to FAA) on AAM strategies and regulatory overhaul to prepare the Kingdom for AAM. This 8-month project involved

all facets of aviation for the country, the modification of policies and regulations, preparations for investment in billions of dollars of infrastructure using many of the tools and capabilities NEXA will apply to this WSDOT project.

- **Ohio Department of Transportation** (See Packet B): In 2022. Similar to Virginia, NEXA and CAMI assisted ODOT with policy development, business case studies, economic impact analysis and the materials needed for the Ohio legislature to act aggressively in attracting manufacturers of eVTOLs to the state.

With respect to the WSDOT project, Mr. Dyment will bring prior expertise in multimodal federal and state agency policies and regulations, AAM technology, business case, project cost, infrastructure, and legislative support.

Dave Whittaker, VP, NUAIR

As Chief of Development for NUAIR, Mr. Whitaker is familiar with the approaches many of the leading States and State-sponsored organizations have taken to create a viable AAM ecosystem. He directs NUAIR which is a New York-based nonprofit delivering the Next Generation of UAS/AAM solutions for the benefit of New York State and beyond. With guidance from inception to acceleration, Mr. Whitaker delivers advanced AAM and UAS commercial outcomes and build each state aviation ecosystem on a proven network of systems from incubators to investors and customers to partners. He understands the harmonization needed to innovate airspace, advance aviation, and architect AAM in each community from theory to reality with NUAIR's team of experts led by him. NUAIR has achieved significant milestones over the past nine years, including the establishment of a unique 50nm corridor authorized for true Beyond Visual Line-of-Sight (BVLOS) operations from the FAA. This corridor was modified with significant Safety Case inputs to expand the BVLOS area to 240 square nautical miles and now includes capability for multiple types of small UAS systems. Unique to this corridor is the fact that it begins and ends at two international airports, both in Class C and Class D airspace, which required significant inter-agency planning and coordination with Air Traffic Control (ATC) to determine procedures, and communications protocols. Mr. Whitaker holds a BSEE, Computer Science and Communications Systems from University of Connecticut, an MSEE, Communication & Sensor System Engineering from Syracuse University and an MBA, Management & Organizational Development from Syracuse University.

Prior relevant projects:

- **Utah AAM Integration Project**. Mr. Whitaker's expertise reaches beyond New York supporting roadmaps for other states such as Utah Department of Transportation, Division of Aeronautics. NUAIR is presently leading a team in Utah to develop a "Sandbox" or testing site that will provide a basis for demonstrating and evaluating AAM integration in Utah.

- **Kingdom of Saudi Arabia GACA National AAM Strategy** (See Packet B): In 2023/2024 NUAIR and NEXA Advisors advised the GACA (KSA equivalent to FAA) on AAM strategies and regulatory overhaul to prepare the Kingdom for AAM. This 8-month project involved all facets of aviation for the country, the modification of policies and regulations, preparations for investment in billions of dollars of infrastructure using many of the tools and capabilities NUAIR will apply to this WSDOT project.
- **FAA, NASA, Local and State Government:** Mr. Whitaker has facilitated work to assist local government in their efforts to acquire services via the RFP process. Additionally, the submission and completion of the RFP process to complex calls have been executed with NUAIR awards from: FAA, NASA, Local and State Government, as well as Industry and Academia.

With respect to the WSDOT project, Mr. Whitaker will bring prior expertise in multimodal federal and local NY agency policies and FAA and EASA regulations, AAM technological subjects, and complex stakeholder topics.

Eleanor Herman, President UAM Geomatics Inc.

Ms. Herman is an award-winning researcher and writer who has led cutting edge market and economic research projects for aerospace and aviation clients, specializing in industry research, market analysis, project management, and technical publications advancing sector capabilities. She had major research responsibilities for the groundbreaking multi-client study “Urban Air Mobility – Economics and Global Markets 2020-2040” which was completed in 2019 and has served on the project management team for several State AAM studies including Oklahoma, Virginia, and Arkansas. As Associate Publisher of NATO's NATIONS magazine, she covered the global defense industry. She has authored studies in aerospace and business aviation.

Yolanka Wulff, President Yolanka Wulff Consulting

Yolanka Wulff is Executive Director of CAMI, the Community Air Mobility Initiative, a nonprofit organization whose mission is to support the responsible and sustainable integration of aviation into community transportation through education, communication, and collaboration. Yolanka is responsible for CAMI’s programs including the development of topical resources, webinars, conferences, and collaborations. This includes the Urban Air Policy Collaborative, a cohort-based curriculum for state and local agencies and airports. Prior to co-founding CAMI in 2019, she has been a sustainable aviation consultant since 2010, working with industry, government, academia and nonprofits on policy, standards, industry development, market challenges, and communications. Yolanka is a member of the FAA’s Advanced Aviation Advisory Committee (AAAC), the Transportation Research Board New Users of Shared Airspace Committee, the GAMA Electric Propulsion Innovation Committee, the Vertical Flight Society Board of Directors, and is the organizer and convener of the annual VFS Electric Aircraft Symposium. She is a nonprofit and business attorney and consultant with over two decades of experience in the

successful development, implementation, and management of mission-driven programs, with a focus on sustainable transportation, land use, and collaborative solutions.

Evaluation Criterion 4 – NEXA Advisors Project Management System

The system that NEXA uses to develop a project schedule, track the progress of a project, and manage budget is **Microsoft Project** due to its rich features and its interconnectivity with other Microsoft Office apps including Excel, Word, and PowerPoint. Microsoft Project offers its robust reporting capabilities, providing NEXA and our clients with the ability to generate customizable reports and dashboards to track project performance, analyze data, and communicate progress to stakeholders. Its built-in file-sharing system, task assignments, and assignment tracking allow for extensive collaboration capabilities.

Some other processes that NEXA uses to maintain quality control include:

- Staying updated with news on AAM by subscribing to multiple new websites and letters specializing in aviation. It is essential to always be at the forefront of the AAM landscape because our models and analysis will change with the landscape.
- When communicating with clients or stakeholders, we provide frequent progress emails as well as reports produced by Microsoft Project. We establish a weekly or bi-monthly meeting to review our progress, but the meeting frequency can change according to the client's desires. Typically, the frequency of the meetings increases as the project nears its end so that the deliverables are provided in the exact format the client would like.

Recent contracts where Microsoft Project was used include:

- Virginia AAM Project
- Arkansas AAM Project
- Kingdom of Saudi Arabia AAM Project
- State of Ohio AAM Project
- NASA AAM Community Integration Project

Evaluation Criterion 5 – Project Delivery Approach

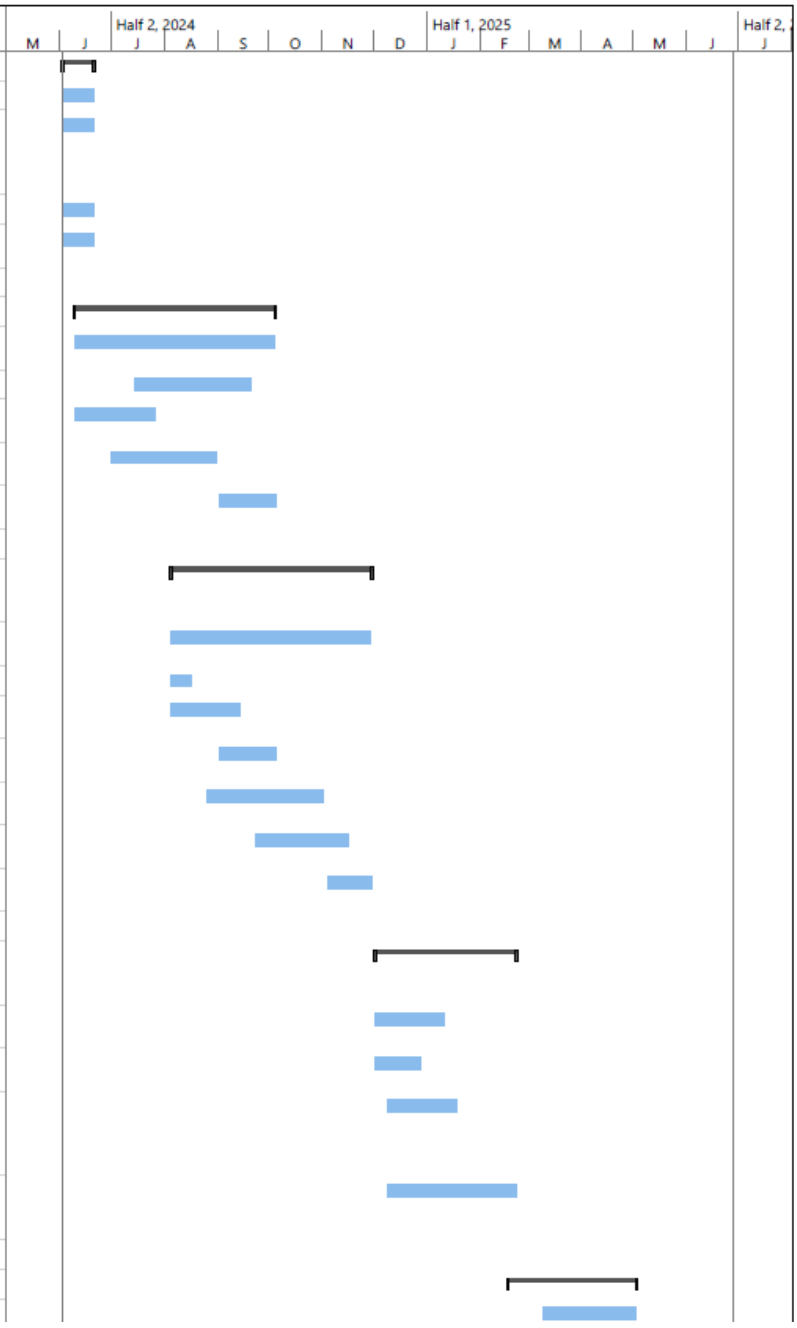
NEXA Advisors and the NEXA WSDOT team have a flexible project delivery approach that can be adapted depending upon client requirements that generally evolve:

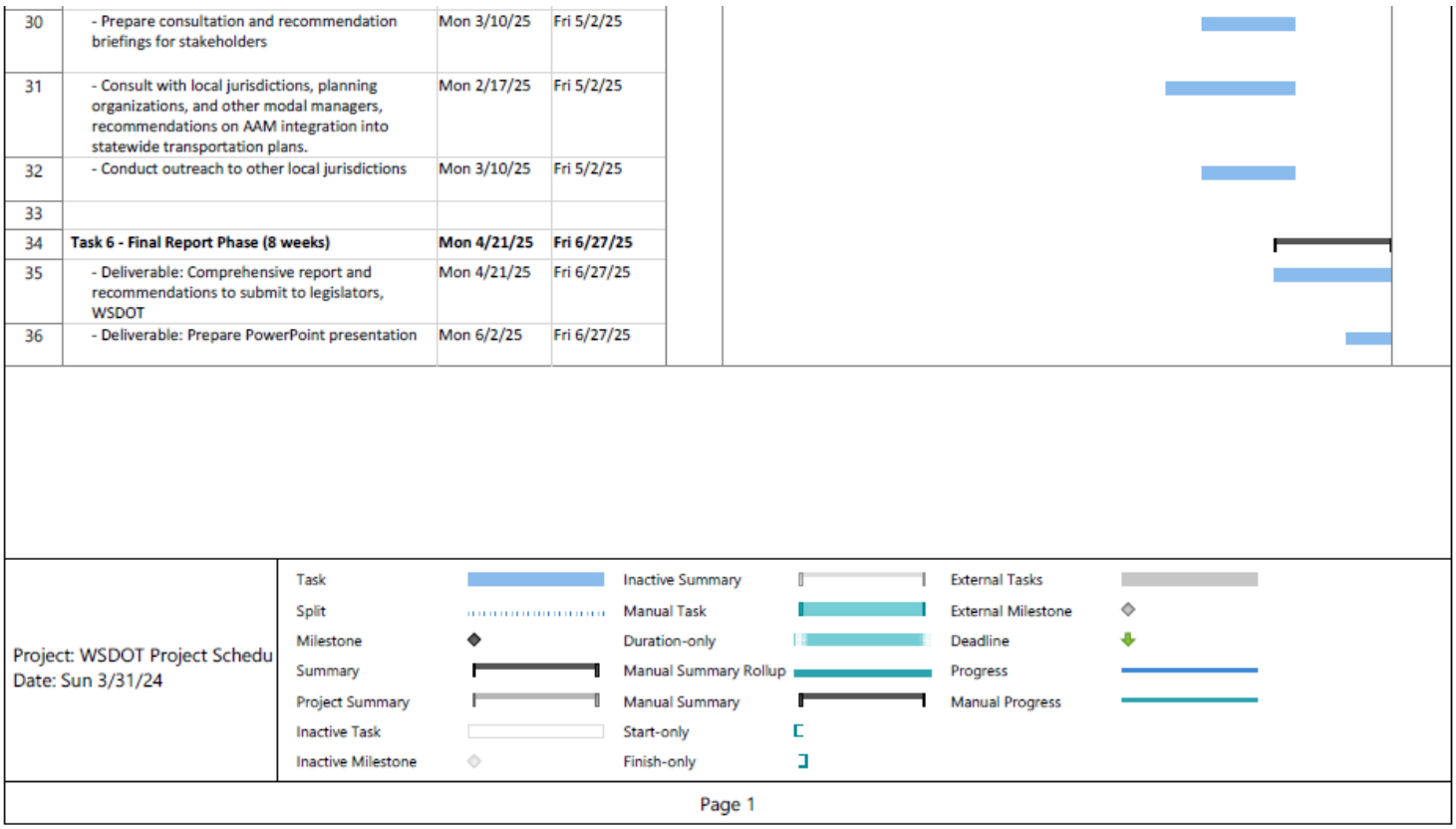
- **Workplan Development Process** – The NEXA Program Manager (PM) develops a draft workplan and delivery schedule in early consultation with the client and with the deputy PMs. The workplan is the first deliverable to the client and is prepared to the decision-made satisfaction of the client.
- **Workplan Contingencies** – Any client-driven or other schedule contingencies can be addressed through early and immediate consultation with WSDOT. We will conduct a business and schedule impact analysis and get prior approvals for any workplan

divergences, follow an established communications norm, and monitor and adapt as needed and approved.

- **Issue Resolution** - Our approach to resolve issue(s) within the project team, client(s) and stakeholders will be to rely upon our communications, leadership, negotiation, interpersonal and active listening skills. Our extensive expertise in all relevant fields and knowledge of policy topics will aid in issue resolution.
- **Elements of Workplan –** A draft WSDOT workplan is presented using Microsoft Project tools:

ID	Task Name	Start	Finish
1	**Task 1 - Project kickoff (2 weeks)**	**Mon 6/3/24**	**Thu 6/20/24**
2	- Assemble team	Mon 6/3/24	Thu 6/20/24
3	- Develop project thesis, goals and final deliverable: State-wide report for the integration of AAM into the current transportation system	Mon 6/3/24	Thu 6/20/24
4	- Draft outline of WSDOT	Mon 6/3/24	Thu 6/20/24
5	- Deliverable: Prepare draft workplan and achieve client sign-off	Mon 6/3/24	Thu 6/20/24
6			
7	**Task 2 - Conduct Research Activities (12 weeks)**	**Mon 6/10/24**	**Fri 10/4/24**
8	- Develop comprehensive safety, regulatory, infrastructure, land use policy framework	Mon 6/10/24	Thu 10/3/24
9	- Develop public acceptance taxonomy	Mon 7/15/24	Fri 9/20/24
10	- Identify stakeholders (public, private, university, etc.)	Mon 6/10/24	Fri 7/26/24
11	- Organize and conduct stakeholder facilitation meetings	Mon 7/1/24	Fri 8/30/24
12	- Deliverable: Summary briefing of findings	Mon 9/2/24	Fri 10/4/24
13			
14	**Task 3 - Develop Business, Economic and Environmental Analysis of State-wide AAM (12 weeks)**	**Mon 8/5/24**	**Fri 11/29/24**
15	- Complete GIS analysis of current Washington State AAM assets	Mon 8/5/24	Thu 11/28/24
16	- Develop comprehensive business case	Mon 8/5/24	Fri 8/16/24
17	- Determine 20+ year CAPEX and OPEX of AAM ecosystem	Mon 8/5/24	Fri 9/13/24
18	- Forecast economic impact, including jobs and catalytic benefits	Mon 9/2/24	Fri 10/4/24
19	- Develop alternative PPP or state governance structures	Mon 8/26/24	Fri 11/1/24
20	- Facilitate internal meetings with Client to assess alternatives	Mon 9/23/24	Fri 11/15/24
21	- Deliverable: Summary findings and alternative tradeoff analysis	Mon 11/4/24	Fri 11/29/24
22			
23	**Task 4 - Develop alternative land use policies for low altitude UAM and vertiport infrastructure development (8 weeks)**	**Mon 12/2/24**	**Fri 2/21/25**
24	- Identify evolving FAA and state authorities and oversight responsibilities	Mon 12/2/24	Fri 1/10/25
25	- Survey policies emerging form other states in AAM planning	Mon 12/2/24	Fri 12/27/24
26	- Identify alternative land use and other policies required to ensure open public access and equitable use case distribution	Mon 12/9/24	Fri 1/17/25
27	- Deliverable: Develop comprehensive recommendations for State-wide AAM deployment	Mon 12/9/24	Fri 2/21/25
28			
29	**Task 5 - State-wide Consultations (8 weeks)**	**Mon 2/17/25**	**Fri 5/2/25**
30	- Prepare consultation and recommendation	Mon 3/10/25	Fri 5/2/25





30	- Prepare consultation and recommendation briefings for stakeholders	Mon 3/10/25	Fri 5/2/25
31	- Consult with local jurisdictions, planning organizations, and other modal managers, recommendations on AAM integration into statewide transportation plans.	Mon 2/17/25	Fri 5/2/25
32	- Conduct outreach to other local jurisdictions	Mon 3/10/25	Fri 5/2/25
33			
34	**Task 6 - Final Report Phase (8 weeks)**	**Mon 4/21/25**	**Fri 6/27/25**
35	- Deliverable: Comprehensive report and recommendations to submit to legislators, WSDOT	Mon 4/21/25	Fri 6/27/25
36	- Deliverable: Prepare PowerPoint presentation	Mon 6/2/25	Fri 6/27/25

- **Risk Mitigation** - We must bear in mind that the AAM industry is in its early stages of development given there are no successful models implemented to date that can be utilized as guidance when developing a strategic path. Additionally, there are several factors outside the industry's control – including the evolution of legal regulation – that could impact the overall success of any business case. These risks, both internal and external to the industry, need to be identified and mitigation plans developed to increase the probability of a positive outcome. The NEXA team will utilize several techniques to identify and mitigate risk, including leveraging its experience with the industry and the regulator to improve predictive accuracy, modeling alternative scenarios to assess the impact on the outcome and optimize the result, and close industry contacts to assess and incorporate their actions and informed perspectives into the strategy. The resulting recommendations will provide the path with the best upside potential with the lowest acceptable risk providing the WSDOT with high confidence that the early-stage decisions will result in positive outcomes.